SpaceX Falcon 9 makes it to orbit in historic first launch

SpaceX launched the Falcon 9 rocket from Kennedy Space Center.

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CAPE CANAVERAL -- What could be a new era in spaceflight dawned Friday with the successful launch of a new private rocket from Cape Canaveral Air Force Station.

Falcon 9 – the gleaming white, 180-foot-tall flagship rocket of commercial upstart SpaceX -- lifted off its launch pad at 2:45 p.m. and soared into partly cloudy skies, riding a trail of fire from its nine Merlin engines. An earlier attempt had aborted with two seconds on the countdown clock.

SpaceX employees watching the launch cheered and literally jumped for joy.

"This has really been a fantastic day, obviously it's been one of the best days of my life," said Elon Musk, the founder of Space X. "Our Falcon 9 rocket to orbit achieved a near bull's-eye on the target."

He said the rocket's next launch – carrying a fully functional Dragon capsule, not the mockup that went into space Friday – would be scheduled this summer and he hoped to launch to the International Space Station next year.

A successful launch on Falcon 9's first test flight was almost unprecedented; Musk on Thursday had given the rocket a "70 to 80 percent" chance of success. We would have been excited to even have the first stage work," he said Friday.

Even some Kennedy Space Center employees applauded the rocket that's supposed to replace the space shuttle to haul cargo – and perhaps people – to the International Space Station.

"Things are going to get really interesting now," one KSC employee said, referring to the push to get NASA to outsource more spaceflights to private companies like SpaceX.

The only problems detected, Musk said, was that the first stage broke up when it hit the ocean and the second stage rolled slightly when in orbit. The first stage is supposed to be reusable to save money and Musk said his team was picking up the pieces and trying to figure out what went wrong.

Falcon 9, which cost just $400 million to develop according to Musk, is a major contender to assume NASA's responsibilities for servicing the space station after the retirement of the space shuttle. President Barack Obama wants to cancel the Constellation moon-rocket program and outsource travel to the space station to private businesses.

The company has a $1.6-billion NASA contract for 12 flights to transport cargo to the space station, beginning in 2012, presuming Falcon 9 can win flight-safety certification. Musk said he'd like to begin flying astronauts "as soon as possible" if NASA allows it.

There was high anxiety before the launch, which was first delayed by technical problems with the self-destruct mechanism that would be used if the rocket veered off course and then by a sailboat that intruded into a restricted offshore area.

The lift-off – after the first attempt was aborted – was a testimony to the flexibility and simplicity Musk and his team built into the launch procedures.

SpaceX engineers were able to analyze the problem – excessive fuel pressure in one of the nine main engines – and ready a second attempt in just an hour, an almost unprecedented turnaround. An engine abort on the far-larger shuttle would require at least 24 hours to drain propellants from the fuel tanks so engineers could trouble-shoot the problem.

"This launch of the Falcon 9 gives us even more confidence that a resupply vehicle will be available after the space shuttle fleet is retired," NASA administator Charlie Bolden said in a statement.

Critics, however, wasted no time in downplaying the significance of the flight.

"This first successful test flight of SpaceX's Falcon 9 rocket is a belated sign that efforts to develop modest commercial space cargo capabilities are showing some promising signs," said Sen. Kay Bailey Hutchison, R- Texas, whose home-state Johnson Space Center would suffer job loses under Obama's proposed space plan.

She said that SpaceX was supposed to augment NASA's ability to deliver cargo and crew to low Earth orbit, not supplant it. She also said that Friday's launch was at least a year behind schedule.

"This test does not change the fact that commercial space programs are not ready to close the gap in human spaceflight if the space shuttle is retired this year with no proven replacement capability and the Constellation program is simultaneously cancelled as the president proposes," she said in a statement.

U.S. Rep. Suzanne Kosmas, D- New Smyrna Beach, called the launch "a significant step in the development of the commercial space industry" but said it didn't eliminate the need for NASA rockets, either the shuttle or some version of Constellation..

"We must both support the emerging commercial space industry and ensure a robust, NASA-led human spaceflight

program in order to maintain our international leadership in space and keep our economy strong," she said.

Years in development, and backed by the fortune of a young Internet billionaire and other investors as well as taxpayer funds, the Falcon 9 has become a bellwether for commercial space efforts.

NASA has invested more than $200 million in seed money to help SpaceX develop and build the rocket. Musk started the company with millions of dollars he earned from selling PayPal, the application he co-created that enables consumers to buy goods securely over the Internet.

Executives from established rocket companies like United Launch Alliance, jointly owned by aerospace giants Boeing and Lockheed Martin, have privately said they want SpaceX to succeed because its success will provide a big boost to the push for outsourcing NASA launch business, which ULA hopes to also grab a slice of.

Although data from the flight is still being analyzed, the launch appeared to go to plan.

The nine-engine first stage fired up on the launch pad and passed a computer-controlled health check, leading to the green light to launch. After clearing the fueling tower and lightning masts at the Air Force station's Launch Complex 40, the engines swiveled to pitch the rocket east over the Atlantic Ocean.

Powered by more than 800,000 pounds of thrust, the rocket rode the first stage for nearly three minutes, when the second stage, powered by a single Merlin engine, took over. The rocket reached its 155-mile orbital altitude at around nine minutes after liftoff.

SpaceX is not the only company trying to get commercial rockets ready to service the space station – Virginia-based Orbital Sciences Corp. is working on its own rocket – but Musk's company is much further along.

In a teleconference on Thursday, Musk had described the launch as "very much a test flight … It's analogous to sort of the beta testing of some new technology." He also warned that one launch "should not be a verdict on the viability of commercial space.

"Commercial space is the only way forward. If we go with super-expensive government developments, in the absence of some massive increase in the space budget, we will never do anything interesting in space."